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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,740	07/04/2004	Gila Levin	P-4775-US	6720
49443	7590	06/28/2006		
PEARL COHEN ZEDEK, LLP 1500 BROADWAY 12TH FLOOR NEW YORK, NY 10036			EXAMINER JACKSON, MONIQUE R	
			ART UNIT	PAPER NUMBER

1773

DATE MAILED: 06/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/500,740

Applicant(s)

LEVIN ET AL.

Examiner

Monique R. Jackson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-47 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claim 47 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e. results in a claim which is not a proper process under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App.1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 7, 10, and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 7 and 28 recite the limitation "**said layer of polymer** and/or said layer of substrate" (emphasis added) in line 2. There is insufficient antecedent basis for this limitation "said layer of polymer" in the claims.

5. Claims 8 and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 8 and 32 recite the limitation "said substrate layer" however considering the substrate is not previously referred to as a "substrate layer", there is insufficient

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antecedent basis for this limitation in the claims, making it unclear as to whether the limitation refers to the substrate or the layer of metal oxide on the substrate.

6. Claims 15, 16, 39 and 40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Though alternative expressions are permissive in the claims, they should be drafted in proper alternative format, i.e. “**selected from A, B or C**”; or in proper Markush claim format, i.e. “selected from the **group consisting of A, B and C**”. A claim that recites “selected from the group consisting of A, B or C” as in instant claims 15 and 39 is improper. It is also noted that “cupper” is misspelled in Claims 15 and 39.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-7, 13-17, 19-20, 22-31, 37-41, 43-44, and 46-47 are rejected under 35 U.S.C. 102(e) or (b) as being anticipated by or Bright (US 2002/0022156A1, also printed as WO 00/26973.) Bright teaches a barrier material for flexible plastic substrates for constructing displays, packaging materials (*hence reads upon wrapping an object*) and electro luminescence lamps wherein the barrier materials comprises at least one layer of transparent conductive oxide such as tin doped indium oxide or other nonstoichiometric metal oxides as recited in paragraph

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0058 (Abstract; Paragraph 0058.) Bright teaches that the barrier material may also comprise a thin metallic film such as aluminum, silver or copper (*reads on antistatic material*); an organic polymer layer, preferably an acrylic Polymer Multi Layer (PML) deposited layer; and a thin transparent dielectric layer such as silica or alumina or other metal oxides (*stoichiometric metal oxides*) and may also include non-stoichiometric dielectric such as silicon oxides and aluminum oxides; wherein the barrier layers are coated on a moving substrate by vacuum deposition or sputtering (Abstract; Paragraphs 0006, 0009, 0048-0050, 0052-0055, 0058-0063, 0073, .) Bright teaches that the substrate may be selected from various polyolefins such as polypropylene and polyesters such as PET, as well as other polymers such as polycarbonate and polyimide, (0046; 0084; Claim 9) and is preferably provided with a polymer base coat or smoothing layer and wherein when used to produce a flat panel display, two coated plastic substrates are separated by a display medium (Paragraph 0045, 0056-0057; Figure 1.) Bright further teach specific layer combinations and examples that read upon the instantly claimed composite wherein the barrier layers have a thickness in the nanometer and angstrom range and the PML acrylic layers have a thickness in the micron range (*hence read upon the term "substrate" and/or "adhesive layer"*) wherein Bright specifically teach that the TCO or ITO layers are preferably 20nm to 300nm for conductivity properties (*also reads on antistatic material and any intermediate or intervening layer reads upon the broad term "adhesive layer"*) (Figures; Examples; Paragraphs 0047-0058.)

9. Claims 1, 2, 22 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Bailan et al (USPN 5,387,433.) Bailan et al teach a coated substrate comprising a glass substrate and a transparent conductive layer made of sub-stoichiometric metallic oxide coated with a metallic oxide overlayer protecting the conductive layer wherein the overlayer has a thickness of 50-

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120nm and preferably contains aluminum oxide Al_2O_3 (*stoichiometric metallic oxide*) (Abstract; Col. 3, lines 39-52; Claim 13.)

10. Claims 1, 3, 8, 9, 11, 13-22, 24, 29-33, 35, 37-47 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 0 437 946 (EP'946.) EP'946 teaches a packaging material comprising a substrate such as a PET or LDPE film coated with a non-stoichiometric metal oxide layer to an optical thickness that would inherently fall within the claimed range, wherein the metal is aluminum, magnesium or tin; and then laminated to a LDPE (reads on claims 17 and 18) or PET film, respectively, via a polyurethane adhesive applied at a coating weight of 2.8 g/m² (*reads on the layer of polymer as in Claim 3 or the adhesive layer with claimed thickness*), wherein the examples utilize a substrate thickness within the instantly claimed range (Abstract; Examples 1-2; Col. 3, lines 17-Col. 4, line 55.) EP'946 further teaches that the oxide layer is coated on a moving substrate by vacuum deposition (Col. 5, line 48-Col. 6, line 30.)

11. Claims 1, 3, 5, 8, 11, 13-16, 19-22, 24, 26, 29-32, 35, 37-40, and 43-46 are rejected under 35 U.S.C. 102(b) as being anticipated by Zait et al (USPN 5,693,415.) Zait et al teach a composite film adhereable to a surface of an object such as a window wherein the composite comprises a substrate 12, preferably a polyester such as PET, a non stoichiometric aluminum oxide layer 14 deposited on one side of the substrate, and an adhesive layer such as an acrylic adhesive 16, coated on the aluminum oxide layer, wherein the composite may further comprise a second intermediate polyester film with adhesive 18 to protect the aluminum oxide layer (Abstract; Col. 2, lines 28-36; Col. 2, line 59-Col. 3, line 2; Figure 1.) Zait et al teach that the typical thickness for each layer ranges from 10-200 microns for the polyester substrate 12, 50-2000 angstroms for the aluminum oxide, 2-10 microns for the adhesive and 1.5-4 microns for the

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protective polyester layer with adhesive; and that the aluminum oxide layer is deposited on the substrate by thermal evaporation wherein the substrate is moving at a selected rate during the deposition to determine the thickness of the oxide layer which is substantially similar throughout the composite film (Col. 3, lines 3-10; Col. 3, line 61-Col. 4, line 6; Col. 4, lines 35-65.)

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 8-12, 18, 21, 32-36, 42 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bright. The teachings of Bright et al are discussed above, though Bright et al teach all of the layers of the instant composite with broadly defined thickness limitations, Bright does not specifically teach the instantly claimed thickness ranges for each of the layers and/or substrates. However, given the examples taught by Bright as well as the broad thickness limitations on the same order of magnitude as the instantly claimed ranges, one having ordinary skill in the art at the time of the invention would have been motivated to utilize routine experimentation to determine the optimum thickness of each layer or substrate, as well as the number of layers and layer combination, to provide the desired barrier, conductivity and mechanical properties for a particular end use. Further, considering Bright teaches the use of polyolefins in general and more specifically polypropylene, as suitable substrate materials, functionally equivalent polyethylene including LDPE, an obvious species of polyolefin, would have been obvious to one having ordinary skill in the art at the time of the invention.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R. Jackson whose telephone number is 571-272-1508.

The examiner can normally be reached on Mondays-Thursdays, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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Primary Examiner
Technology Center 1700
June 25, 2006